

M·C·C·

Micro Commercial Components
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**FR301
THRU
FR307**

Features

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Fast Switching Speed For High Efficiency

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

MCC Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR301	---	50V	35V	50V
FR302	---	100V	70V	100V
FR303	---	200V	140V	200V
FR304	---	400V	280V	400V
FR305	---	600V	420V	600V
FR306	---	800V	560V	800V
FR307	---	1000V	700V	1000V

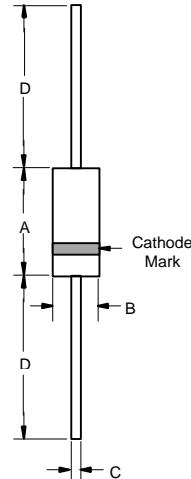
Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	3 A	$T_A = 55^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	150A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.3V	$I_{FM} = 3.0\text{A}; T_A = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10 μA 150 μA	$T_A = 25^\circ\text{C}$ $T_A = 55^\circ\text{C}$
Maximum Reverse Recovery Time FR301-304 FR305 FR306-307	T_{rr}	150ns 250ns 500ns	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$
Typical Junction Capacitance	C_J	65pF	Measured at 1.0MHz, $V_R=4.0\text{V}$

*Pulse Test: Pulse Width 300 μsec , Duty Cycle 1%

**3 Amp Fast Recovery Rectifier
50 to 1000 Volts**

DO-201AD

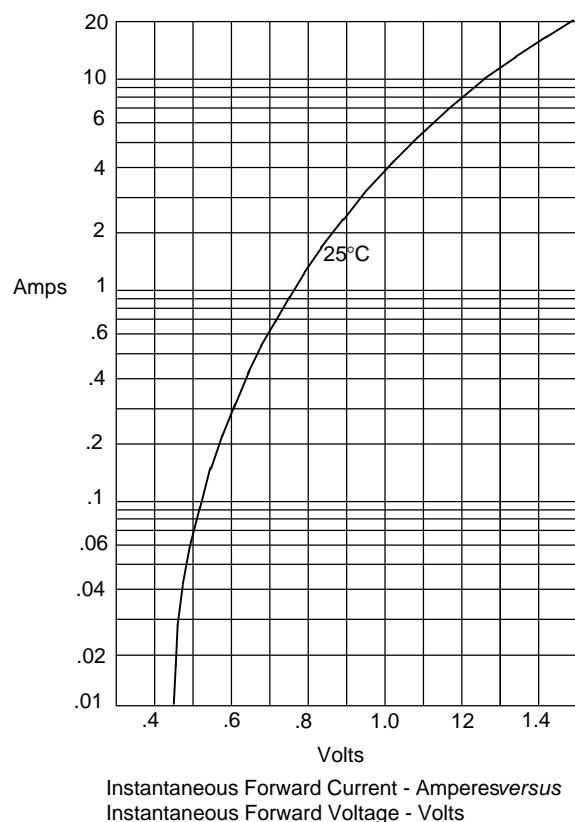


DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	---	.370	---	9.50	
B	---	.250	---	6.40	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

FR301 thru FR307

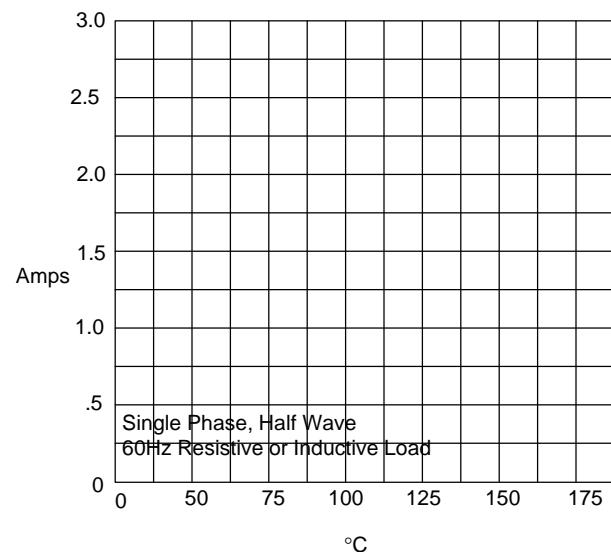
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Figure 1
Typical Forward Characteristics



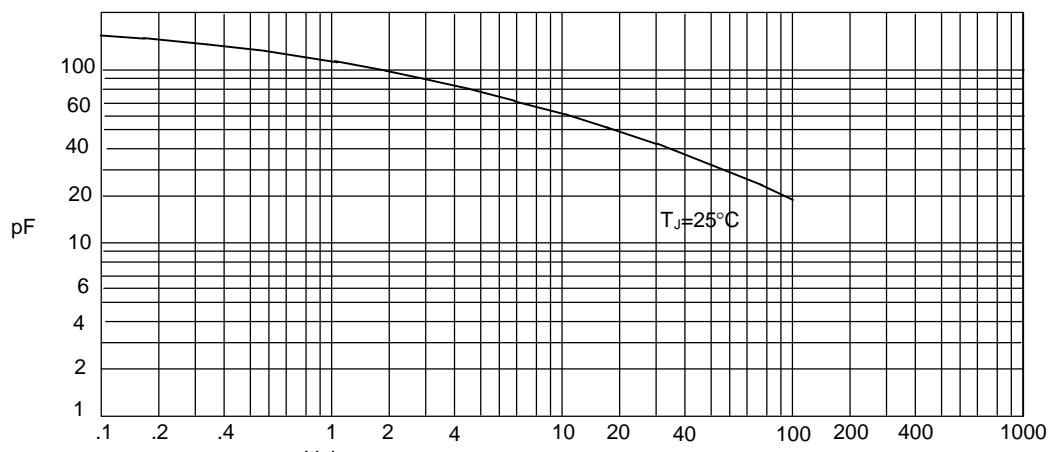
Instantaneous Forward Current - Amperes versus
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



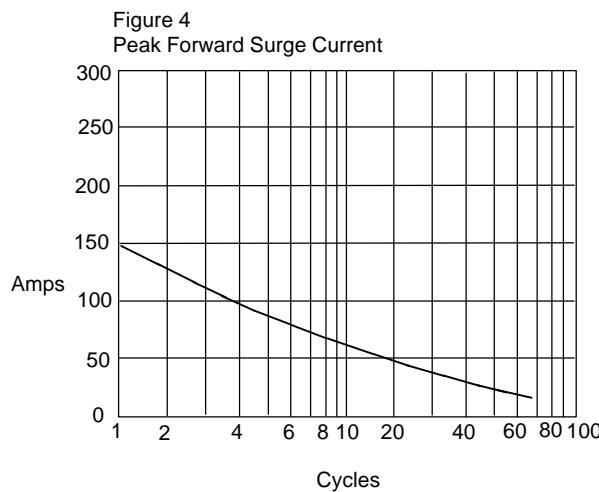
Average Forward Rectified Current - Amperes versus
Ambient Temperature - °C

Figure 3
Junction Capacitance



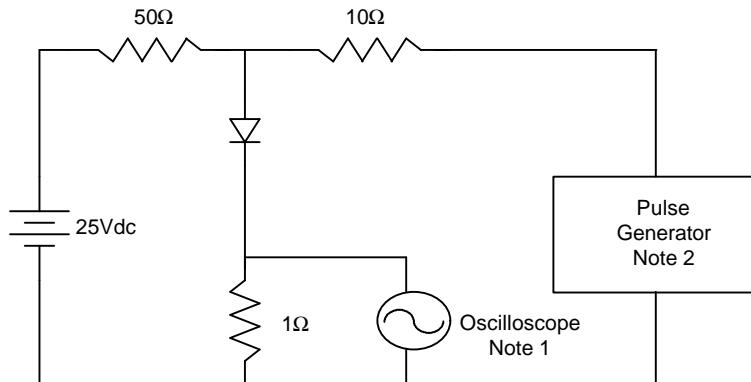
Junction Capacitance - pF versus
Reverse Voltage - Volts

FR301 thru FR307



Peak Forward Surge Current - Amperesversus
Number Of Cycles At 60Hz - Cycles

Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:

1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

